

Use Attainability Analysis

for

WBID 0322 Castile Creek

Submitted by  
SES Inc.

to

Missouri Department of Natural Resources  
Water Protection Program

Date received: November 14, 2007

**Field Data Sheets for Recreation Use Stream Surveys**

**Data Sheet A - Water Body Identification**

**I. Water Body Information** (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): Castile Creek	
Missouri Water Body Identification (WBID) Number:	322
8 digit HUC code: 10240012	County: Clinton
Upstream Legal Description (from Table H):	T58N R32W sec. 24
Downstream Legal Description (from Table H):	T55N R32W sec. 25
Number of sites evaluated:	19
List all site numbers, listed consequently upstream to downstream: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19	

**Site Locations Map(s):** Attach a map of the entire segment with assessment sites clearly labeled.  
Mark any other items that may be of interest.

**II. Facility Information** (list all permitted discharges to the water body segment)

Facility Name(s) and Permit Number(s): Airy Acres Mobile Home Ct. MO 0117897
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**III. UAA Surveyor** (please print legibly)

Name of Surveyor: Gilisa Gould	Telephone Number: (913)307-0054
Organization/Employer: SES, Inc.	

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

**Signed:** Gilisa Gould

**Date:** 10/3/2007



The map displays the 322 watershed area, with the 322-Castle Cr. waterway highlighted in blue. Nineteen sampling sites are marked along the waterway and labeled Site 1 through Site 19. The map includes a grid of roads, with major roads like State Hwy W, State Hwy P, State Hwy NN, State Hwy H, State Hwy E, State Hwy Z, State Hwy J, State Hwy V, and State Hwy Y. Towns and cities shown include Maysville, Amity, Clarksdale, Stewartville, Osborn, Easton, Agency, Gower, Plattsburg, Lathrop, Dearborn, Edgerton, Trimble, and Holt. The map also shows county boundaries and various local roads like County Rd 275, County Rd 296, County Rd 301, County Rd 66, County Rd 59, County Rd 61, County Rd 53, County Rd 55, County Rd 139, County Rd 130, County Rd 106, County Rd 114, County Rd 354, County Rd 315, County Rd 316, County Rd 284, County Rd 278, County Rd 236, County Rd 227, County Rd 225, County Rd 224, County Rd 220, County Rd 216, County Rd 214, County Rd 208, County Rd 207, County Rd 206, County Rd 205, County Rd 204, County Rd 203, County Rd 202, County Rd 201, County Rd 200, County Rd 199, County Rd 198, County Rd 197, County Rd 196, County Rd 195, County Rd 194, County Rd 193, County Rd 192, County Rd 191, County Rd 190, County Rd 189, County Rd 188, County Rd 187, County Rd 186, County Rd 185, County Rd 184, County Rd 183, County Rd 182, County Rd 181, County Rd 180, County Rd 179, County Rd 178, County Rd 177, County Rd 176, County Rd 175, County Rd 174, County Rd 173, County Rd 172, County Rd 171, County Rd 170, County Rd 169, County Rd 168, County Rd 167, County Rd 166, County Rd 165, County Rd 164, County Rd 163, County Rd 162, County Rd 161, County Rd 160, County Rd 159, County Rd 158, County Rd 157, County Rd 156, County Rd 155, County Rd 154, County Rd 153, County Rd 152, County Rd 151, County Rd 150, County Rd 149, County Rd 148, County Rd 147, County Rd 146, County Rd 145, County Rd 144, County Rd 143, County Rd 142, County Rd 141, County Rd 140, County Rd 139, County Rd 138, County Rd 137, County Rd 136, County Rd 135, County Rd 134, County Rd 133, County Rd 132, County Rd 131, County Rd 130, County Rd 129, County Rd 128, County Rd 127, County Rd 126, County Rd 125, County Rd 124, County Rd 123, County Rd 122, County Rd 121, County Rd 120, County Rd 119, County Rd 118, County Rd 117, County Rd 116, County Rd 115, County Rd 114, County Rd 113, County Rd 112, County Rd 111, County Rd 110, County Rd 109, County Rd 108, County Rd 107, County Rd 106, County Rd 105, County Rd 104, County Rd 103, County Rd 102, County Rd 101, County Rd 100, County Rd 99, County Rd 98, County Rd 97, County Rd 96, County Rd 95, County Rd 94, County Rd 93, County Rd 92, County Rd 91, County Rd 90, County Rd 89, County Rd 88, County Rd 87, County Rd 86, County Rd 85, County Rd 84, County Rd 83, County Rd 82, County Rd 81, County Rd 80, County Rd 79, County Rd 78, County Rd 77, County Rd 76, County Rd 75, County Rd 74, County Rd 73, County Rd 72, County Rd 71, County Rd 70, County Rd 69, County Rd 68, County Rd 67, County Rd 66, County Rd 65, County Rd 64, County Rd 63, County Rd 62, County Rd 61, County Rd 60, County Rd 59, County Rd 58, County Rd 57, County Rd 56, County Rd 55, County Rd 54, County Rd 53, County Rd 52, County Rd 51, County Rd 50, County Rd 49, County Rd 48, County Rd 47, County Rd 46, County Rd 45, County Rd 44, County Rd 43, County Rd 42, County Rd 41, County Rd 40, County Rd 39, County Rd 38, County Rd 37, County Rd 36, County Rd 35, County Rd 34, County Rd 33, County Rd 32, County Rd 31, County Rd 30, County Rd 29, County Rd 28, County Rd 27, County Rd 26, County Rd 25, County Rd 24, County Rd 23, County Rd 22, County Rd 21, County Rd 20, County Rd 19, County Rd 18, County Rd 17, County Rd 16, County Rd 15, County Rd 14, County Rd 13, County Rd 12, County Rd 11, County Rd 10, County Rd 9, County Rd 8, County Rd 7, County Rd 6, County Rd 5, County Rd 4, County Rd 3, County Rd 2, County Rd 1, County Rd 0.



WBID # 322  
 Site # 1

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 9/27/07 8:40	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Grindstone Rd.
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0375872	4410387		9.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0375831	4410262		11.5	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
19	Downstream	20	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
 Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Bridge (access point) has been newly constructed.				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	100 % Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

30% vegetation in water (arrowhead, smart weed). Banks are 100% vegetated (trees, nettle, etc.).
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>1</u>  Estimated Channel Incision: <u>1.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP/ FOM) <b>01</b> UTM X: <u>0375872</u> UTM Y: <u>4410387</u> +/- <u>9.1</u> (meters) <b>11</b> UTM X: <u>0385831</u> UTM Y: <u>4410262</u> +/- <u>11.5</u> (meters)  Average Stream Width: <u>2.4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/27/07</u> Time: <u>8:40</u>  Dissolved Oxygen: <u>7.2</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.05	0.3	0.01	0.4	0.01	0.2	0.05	0.1	0.01	0.1	0.01	0.2	0.05	0.4	0.01	0.37	0.01	0.1	0.01	0.2	0.01
2	0.9	0.10	0.5	0.10	0.7	0.10	0.4	0.10	0.2	0.01	0.2	0.01	0.4	0.05	0.7	0.10	0.74	0.05	0.2	0.05	0.4	0.05
3	1.4	0.15	0.8	0.10	1.1	0.15	0.5	0.10	0.3	0.10	0.3	0.05	0.5	0.10	1.1	0.10	1.11	0.10	0.3	0.10	0.5	0.10
4	1.8	0.10	1.1	0.15	1.5	0.15	0.7	0.10	0.4	0.10	0.4	0.05	0.7	0.10	1.5	0.20	1.48	0.15	0.4	0.10	0.7	0.10
5	2.3	0.10	1.4	0.10	1.9	0.20	0.9	0.10	0.5	0.05	0.5	0.05	0.9	0.10	1.9	0.20	1.85	0.10	0.5	0.05	0.9	0.10
6	2.7	0.10	1.6	0.10	2.2	0.20	1.1	0.10	0.5	0.05	0.5	0.05	1.1	0.15	2.2	0.20	2.22	0.10	0.5	0.01	1.1	0.05
7	3.2	0.10	1.9	0.05	2.6	0.20	1.3	0.05	0.6	0.01	0.6	0.05	1.3	0.05	2.6	0.20	2.59	0.05	0.6	0.01	1.3	0.05
8	3.7	0.05	2.2	0.05	3.0	0.15	1.4	0.05	0.7	0.01	0.7	0.01	1.4	0.05	3.0	0.15	2.96	0.05	0.7	0.01	1.4	0.01
9	4.1	0.01	2.5	0.01	3.3	0.05	1.6	0.01	0.8	0.01	0.8	0.01	1.6	0.01	3.3	0.05	3.33	0.01	0.8	0.01	1.6	0.01
Right Bank	4.6	0.00	2.7	0.00	3.7	0.00	1.8	0.00	0.9	0.00	0.9	0.00	1.8	0.00	3.7	0.00	3.7	0.00	0.9	0.00	1.8	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10.03.07

WBID #        322  
 Site #        2

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time:	9/27/07        9:32	Site Location Description (e.g. road crossing):
Personnel:	D. Dodson and G. Gould	Hwy O
Current Weather Conditions:	Sunny	Facility Name:        Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days:	1.09 inches	Permit Number:        MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0375317	440880		5.8	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0375241	4408699		5.8	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
21	Downstream	22	Upstream	23	Livestock Watering
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
24	Livestock Watering				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock watering
comments/other: see pictures				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	100 % Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

40% vegetation in stream (smartweed especially)
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
brown					
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>2</u>  Estimated Channel Incision: <u>0.2</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0375317</u> UTM Y: <u>440880</u> +/- <u>5.8</u> (meters) <b>11</b> UTM X: <u>0375241</u> UTM Y: <u>4408699</u> +/- <u>5.8</u> (meters)  Average Stream Width: <u>3.4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>																Dissolved Oxygen						
Date: <u>9/27/07</u> Time: <u>9:33</u>  Dissolved Oxygen: <u>10.3</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.9</u> (°C)																						
Transect Cross-Section																						
Station	<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.01	0.6	0.05	0.6	0.10	0.4	0.05	0.4	0.05	0.4	0.01	0.1	0.01	0.1	0.01	0.18	0.01	0.5	0.10	0.3	0.10
2	0.9	0.15	1.1	0.15	1.1	0.25	0.7	0.10	0.7	0.20	0.7	0.05	0.1	0.01	0.2	0.01	0.36	0.05	0.9	0.20	0.5	0.25
3	1.4	0.20	1.7	0.20	1.7	0.40	1.1	0.10	1.1	0.25	1.1	0.10	0.2	0.01	0.3	0.01	0.54	0.10	1.4	0.20	0.8	0.50
4	1.8	0.20	2.2	0.30	2.2	0.55	1.5	0.15	1.5	0.25	1.5	0.20	0.2	0.01	0.4	0.01	0.72	0.15	1.8	0.25	1.1	0.60
5	2.3	0.25	2.8	0.50	2.8	0.60	1.9	0.10	1.9	0.25	1.9	0.10	0.3	0.01	0.5	0.01	0.9	0.15	2.3	0.40	1.4	0.60
6	2.7	0.30	3.3	0.55	3.3	0.50	2.2	0.05	2.2	0.20	2.2	0.15	0.3	0.01	0.5	0.01	1.08	0.05	2.8	0.50	1.6	0.60
7	3.2	0.30	3.9	0.50	3.9	0.35	2.6	0.05	2.6	0.15	2.6	0.10	0.4	0.01	0.6	0.01	1.26	0.05	3.2	0.30	1.9	0.50
8	3.7	0.15	4.4	0.25	4.4	0.20	3.0	0.05	3.0	0.05	3.0	0.05	0.4	0.01	0.7	0.01	1.44	0.01	3.7	0.05	2.2	0.30
9	4.1	0.05	5.0	0.10	5.0	0.15	3.3	0.01	3.3	0.01	3.3	0.05	0.5	0.01	0.8	0.01	1.62	0.01	4.1	0.01	2.4	0.30
<b>Right Bank</b>	4.6	0.00	5.5	0.00	5.5	0.00	3.7	0.00	3.7	0.00	3.7	0.00	0.5	0.00	0.9	0.00	1.8	0.00	4.6	0.00	2.7	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10.03.07

WBID # 322  
 Site # 3

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 10:21	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Gridley Rd.
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0374859	4407152		6.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0374801	4407082		7.6	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
25	Downstream	26	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
 Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Cattle spotted upstream of bridge. Also, tires and other trash found in transects.				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	100 % Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

30% smart weed	Banks are highly vegetated.
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader



# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>3</u>  Estimated Channel Incision: <u>0.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0374859</u> UTM Y: <u>4407152</u> +/- <u>6.4</u> (meters) <b>11</b> UTM X: <u>0374801</u> UTM Y: <u>4407082</u> +/- <u>7.6</u> (meters)  Average Stream Width: <u>2.6</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>														<b>Dissolved Oxygen</b>								
														Date: <u>9/27/07</u> Time: <u>10:22</u>  Dissolved Oxygen: <u>6.9</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>24.3</u> (°C)								
<b>Transect Cross-Section</b>																						
<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.2	0.01	0.1	0.01	0.2	0.01	0.3	0.01	0.4	0.05	0.4	0.05	0.5	0.10	0.1	0.01	0.27	0.01	0.4	0.01	0.3	0.05
2	0.4	0.01	0.2	0.01	0.4	0.01	0.5	0.10	0.7	0.10	0.7	0.15	0.9	0.20	0.1	0.01	0.54	0.05	0.7	0.05	0.5	0.15
3	0.5	0.01	0.3	0.01	0.5	0.01	0.8	0.10	1.1	0.20	1.1	0.25	1.4	0.25	0.2	0.01	0.81	0.10	1.1	0.20	0.8	0.20
4	0.7	0.01	0.4	0.01	0.7	0.05	1.1	0.25	1.5	0.25	1.5	0.30	1.8	0.25	0.2	0.00	1.08	0.15	1.5	0.25	1.1	0.25
5	0.9	0.00	0.5	0.01	0.9	0.05	1.4	0.25	1.9	0.25	1.9	0.25	2.3	0.25	0.3	0.01	1.35	0.15	1.9	0.30	1.4	0.25
6	1.1	0.00	0.5	0.01	1.1	0.01	1.6	0.20	2.2	0.20	2.2	0.15	2.8	3.00	0.3	0.01	1.62	0.20	2.2	0.20	1.6	0.20
7	1.3	0.01	0.6	0.01	1.3	0.05	1.9	0.20	2.6	0.10	2.6	0.10	3.2	0.30	0.4	0.01	1.89	0.10	2.6	0.15	1.9	0.15
8	1.4	0.01	0.7	0.01	1.4	0.05	2.2	0.20	3.0	0.05	3.0	0.05	3.7	0.20	0.4	0.01	2.16	0.10	3.0	0.05	2.2	0.10
9	1.6	0.01	0.8	0.01	1.6	0.01	2.4	0.10	3.3	0.01	3.3	0.01	4.1	0.05	0.5	0.01	2.43	0.01	3.3	0.05	2.4	0.05
Right Bank	1.8	0.00	0.9	0.00	1.8	0.00	2.7	0.00	3.7	0.00	3.7	0.00	4.6	0.00	0.5	0.00	2.7	0.00	3.7	0.00	2.7	0.00
Feature Type	run		run		run		run		run		run		run		riffle		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 4

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 9/27/07 10:57	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Frost
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0374066	4405538		3.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0374021	4405421		5.8	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
27	Livestock Watering	28	Upstream	29	Downstream
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 4

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock watering
comments/other:  see photos				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	100 % Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

10-15% spike rush, water primrose
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
Brown					
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 4

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>4</u>  Estimated Channel Incision: <u>1.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0374066</u> UTM Y: <u>4405538</u> +/- <u>3.4</u> (meters) <b>11</b> UTM X: <u>0374021</u> UTM Y: <u>4405421</u> +/- <u>5.8</u> (meters)  Average Stream Width: <u>3.8</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/27/07</u> Time: <u>11:01</u>  Dissolved Oxygen: <u>10.2</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>25.3</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.4	0.05	0.5	0.20	0.4	0.10	0.2	0.20	0.2	0.01	0.2	0.01	0.4	0.05	0.5	0.05	0.64	0.10	0.6	0.05	0.5	0.10
2	0.7	0.10	0.9	0.25	0.7	0.15	0.4	0.40	0.4	0.05	0.4	0.01	0.7	0.30	0.9	0.30	1.28	0.40	1.1	0.15	0.9	0.15
3	1.1	0.10	1.4	0.30	1.1	0.25	0.5	0.40	0.5	0.05	0.5	0.10	1.1	0.50	1.4	0.45	1.92	0.65	1.7	0.60	1.4	0.25
4	1.5	0.15	1.8	0.40	1.5	0.20	0.7	0.40	0.7	0.10	0.7	0.05	1.5	0.45	1.8	0.45	2.56	0.75	2.2	0.55	1.8	0.15
5	1.9	0.20	2.3	0.60	1.9	0.35	0.9	0.40	0.9	0.10	0.9	0.01	1.9	0.35	2.3	0.50	3.2	0.75	2.8	0.50	2.3	0.20
6	2.2	0.10	2.8	0.45	2.2	0.30	1.1	0.35	1.1	0.10	1.1	0.00	2.2	0.25	2.8	0.45	3.84	0.45	3.3	0.30	2.8	0.20
7	2.6	0.10	3.2	0.40	2.6	0.25	1.3	0.30	1.3	0.10	1.3	0.01	2.6	0.20	3.2	0.25	4.48	0.30	3.9	0.30	3.2	0.10
8	3.0	0.05	3.7	0.20	3.0	0.20	1.4	0.20	1.4	0.05	1.4	0.01	3.0	0.10	3.7	0.10	5.12	0.20	4.4	0.20	3.7	0.05
9	3.3	0.05	4.1	0.10	3.3	0.10	1.6	0.10	1.6	0.01	1.6	0.01	3.3	0.05	4.1	0.10	5.76	0.10	5.0	0.20	4.1	0.01
<b>Right Bank</b>	3.7	0.00	4.6	0.00	3.7	0.00	1.8	0.00	1.8	0.00	1.8	0.00	3.7	0.00	4.6	0.00	6.4	0.00	5.5	0.00	4.6	0.00
<b>Feature Type</b> (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 5

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 12:15	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Rogers Rd.
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0373474	4403172		3.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0373443	4403071		5.2	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
30	Upstream	31	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
Site # 5

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: None				

**Substrate:**

% Cobble	10	% Gravel	10	% Sand	% Silt	80	% Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

2% algae, duckweed
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
Brown					
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 5

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>5</u>  Estimated Channel Incision: <u>2.7</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0373474</u> UTM Y: <u>4403172</u> +/- <u>3.4</u> (meters) <b>11</b> UTM X: <u>0373443</u> UTM Y: <u>4403071</u> +/- <u>5.2</u> (meters)  Average Stream Width: <u>4.1</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>																Dissolved Oxygen						
Date: <u>9/27/07</u> Time: <u>12:15</u>  Dissolved Oxygen: <u>10.7</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>24.3</u> (°C)																						
Transect Cross-Section																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.5	0.01	0.6	0.01	0.4	0.05	0.6	0.05	0.5	0.10	0.5	0.05	0.4	0.01	0.4	0.01	0.09	0.01	0.4	0.05	0.5	0.05
2	0.9	0.10	1.1	0.05	0.7	0.10	1.1	0.10	0.9	0.20	0.9	0.15	0.7	0.05	0.7	0.05	0.18	0.01	0.7	0.05	0.9	0.05
3	1.4	0.20	1.7	0.05	1.1	0.05	1.7	0.10	1.4	0.30	1.4	0.20	1.1	0.05	1.1	0.05	0.27	0.01	1.1	0.05	1.4	0.10
4	1.8	0.30	2.2	0.10	1.5	0.05	2.2	0.10	1.8	0.35	1.8	0.20	1.5	0.05	1.5	0.05	0.36	0.05	1.5	0.10	1.8	0.10
5	2.3	0.25	2.8	0.05	1.9	0.05	2.8	0.15	2.3	0.40	2.3	0.20	1.9	0.10	1.9	0.05	0.45	0.05	1.9	0.15	2.3	0.15
6	2.7	0.25	3.3	0.15	2.2	0.10	3.3	0.20	2.8	0.35	2.8	0.20	2.2	0.10	2.2	0.01	0.54	0.01	2.2	0.20	2.8	0.20
7	3.2	0.25	3.9	0.15	2.6	0.05	3.9	0.20	3.2	0.25	3.2	0.15	2.6	0.10	2.6	0.01	0.63	0.01	2.6	0.15	3.2	0.15
8	3.7	0.20	4.4	0.20	3.0	0.01	4.4	0.15	3.7	0.15	3.7	0.15	3.0	0.05	3.0	0.01	0.72	0.01	3.0	0.05	3.7	0.10
9	4.1	0.05	5.0	0.10	3.3	0.01	5.0	0.10	4.1	0.05	4.1	0.10	3.3	0.05	3.3	0.01	0.81	0.01	3.3	0.01	4.1	0.05
Right Bank	4.6	0.00	5.5	0.00	3.7	0.00	5.5	0.00	4.6	0.00	4.6	0.00	3.7	0.00	3.7	0.00	.9	0.00	3.7	0.00	4.6	0.00
Feature Type	run		run		run		run		run		run		run		riffle		run		run		run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 6

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 13:20	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Hwy Y
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)			
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0372508	4400765	5.2
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy: Meters
	0372592	4400661	7.3

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
32	Upstream	33	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
 Site # 6

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:

Comments: Located outside of Stewartville

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other: None

**Substrate:**

% Cobble	10	% Gravel	30	% Sand	% Silt	60	% Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

Mostly on banks. Small amount of algae in water (2-5%)

**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 6

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader



# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>6</u> Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0372508</u> UTM Y: <u>4400765</u> +/- <u>5.2</u> (meters) <b>11</b> UTM X: <u>0372592</u> UTM Y: <u>4400661</u> +/- <u>7.3</u> (meters) Average Stream Width: <u>5.2</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width) Field Staff: <u>Drew Dodson and Gilisa Gould</u>																<b>Dissolved Oxygen</b>						
																Date: <u>9/27/07</u> Time: <u>13:21</u> Dissolved Oxygen: <u>9.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>23.1</u> (°C)						
<b>Transect Cross-Section</b>																						
<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.4	0.60	0.7	0.20	0.8	0.10	0.6	0.20	0.6	0.05	0.6	0.10	0.6	0.15	0.7	0.05	0.37	0.01	0.3	0.01	0.1	0.01
2	0.7	0.70	1.5	0.20	1.6	0.55	1.3	0.40	1.3	0.10	1.1	0.20	1.1	0.30	1.5	0.05	0.74	0.10	0.5	0.15	0.2	0.01
3	1.1	0.75	2.2	0.20	2.5	0.65	1.9	1.00	1.9	0.25	1.7	0.35	1.7	0.40	2.2	0.05	1.11	0.10	0.8	0.15	0.3	0.01
4	1.5	0.70	2.9	0.75	3.3	0.65	2.6	1.00	2.6	0.55	2.2	0.60	2.2	0.45	2.9	0.01	1.48	0.15	1.1	0.15	0.4	0.05
5	1.9	0.60	3.7	0.80	4.1	0.80	3.2	1.00	3.2	0.65	2.8	0.75	2.8	0.50	3.7	0.00	1.85	0.20	1.4	0.10	0.5	0.05
6	2.2	0.50	4.4	0.80	4.9	0.75	3.8	0.70	3.8	0.75	3.3	0.85	3.3	0.65	4.4	0.00	2.22	0.20	1.6	0.10	0.5	0.10
7	2.6	0.35	5.1	0.80	5.7	0.40	4.5	0.50	4.5	0.40	3.9	0.75	3.9	0.60	5.1	0.00	2.59	0.25	1.9	0.10	0.6	0.10
8	3.0	0.20	5.8	0.65	6.6	0.20	5.1	0.45	5.1	0.15	4.4	0.40	4.4	0.40	5.8	0.01	2.96	0.20	2.2	0.10	0.7	0.05
9	3.3	0.10	6.6	0.30	7.4	0.10	5.8	0.10	5.8	0.05	5.0	0.35	5.0	0.10	6.6	0.01	3.33	0.05	2.4	0.05	0.8	0.01
Right Bank	3.7	0.00	7.3	0.00	8.2	0.00	6.4	0.00	6.4	0.00	5.5	0.00	5.5	0.00	7.3	0.00	3.7	0.00	2.7	0.00	0.9	0.00
Feature Type	pool		pool		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 7

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 14:07	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	348th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0372490	4398242		6.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0372436	4398124		5.2	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
34	Upstream	35	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 7

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: Corn Fields				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Trash in Stream				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	100 % Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

No aquatic vegetation. Trees and grass on banks
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 7

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>7</u>  Estimated Channel Incision: <u>1.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0372490</u> UTM Y: <u>4398242</u> +/- <u>6.1</u> (meters) <b>11</b> UTM X: <u>0372436</u> UTM Y: <u>4398124</u> +/- <u>5.2</u> (meters)  Average Stream Width: <u>7.1</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>														Dissolved Oxygen					
														Date: <u>9/27/07</u>		Time: <u>14:08</u>			
														Dissolved Oxygen: <u>9.7</u> (mg/L)					
														Dissolved Oxygen: _____ (% sat)					
														Specific Cond: _____ (µS/cm)					
														Water Temperature: <u>24.7</u> (°C)					

Transect Cross-Section																						
	01		02		03		04		05		06		07		08		09		10		11	
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.01	0.7	0.01	0.7	0.15	0.6	0.05	0.6	0.05	0.6	0.01	0.7	0.20	0.7	0.05	0.64	0.01	0.9	0.10	0.7	0.01
2	1.6	0.05	1.5	0.01	1.5	0.30	1.1	0.15	1.1	0.10	1.3	0.05	1.5	0.75	1.5	0.10	1.28	0.10	1.8	0.30	1.5	0.01
3	2.5	0.05	2.2	0.05	2.2	0.25	1.7	0.20	1.7	0.05	1.9	0.10	2.2	0.90	2.2	0.15	1.92	0.15	2.7	0.20	2.2	0.10
4	3.3	0.00	2.9	0.05	2.9	0.30	2.2	0.20	2.2	0.10	2.6	0.15	2.9	0.70	2.9	0.15	2.56	0.10	3.6	0.20	2.9	0.05
5	4.1	0.05	3.7	0.05	3.7	0.25	2.8	0.20	2.8	0.10	3.2	0.15	3.7	0.40	3.7	0.15	3.2	0.10	4.6	0.10	3.7	0.05
6	4.9	0.05	4.4	0.10	4.4	0.20	3.3	0.15	3.3	0.10	3.8	0.10	4.4	0.25	4.4	0.10	3.84	0.01	5.5	0.10	4.4	0.05
7	5.7	0.05	5.1	0.20	5.1	0.20	3.9	0.10	3.9	0.10	4.5	0.05	5.1	0.10	5.1	0.10	4.48	0.01	6.4	0.10	5.1	0.05
8	6.6	0.05	5.8	0.01	5.8	0.10	4.4	0.05	4.4	0.01	5.1	0.05	5.8	0.10	5.8	0.10	5.12	0.01	7.3	0.01	5.8	0.05
9	7.4	0.05	6.6	0.01	6.6	0.01	5.0	0.05	5.0	0.05	5.8	0.05	6.6	0.05	6.6	0.01	5.76	0.01	8.2	0.01	6.6	0.05
<b>Right Bank</b>	8.2	0.00	7.3	0.00	7.3	0.00	5.5	0.00	5.5	0.00	6.4	0.00	7.3	0.00	7.3	0.00	6.4	0.00	9.1	0.00	7.3	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 8

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 9/27/07 15:00	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	336th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0371871	4395580		2.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0371829	4395471		6.4	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
36	Upstream	37	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
 Site # 8

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments Crop Fields				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Trash				

**Substrate:**

30 % Cobble	10 % Gravel	20 % Sand	% Silt	10 % Mud/Clay	30 % Bedrock
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**Aquatic Vegetation:**

50% algae on substrate, 20% grasses in water
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 8

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>8</u>  Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0371871</u> UTM Y: <u>4395580</u> +/- <u>2.1</u> (meters) <b>11</b> UTM X: <u>0371829</u> UTM Y: <u>4395471</u> +/- <u>6.4</u> (meters)  Average Stream Width: <u>4.4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/27/07</u> Time: <u>15:02</u>  Dissolved Oxygen: <u>5.5</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>25.7</u> (°C)
--	---

### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.4	0.01	0.6	0.01	0.2	0.01	0.6	0.05	0.4	0.05	0.6	0.15	0.5	0.30	0.6	0.10	0.46	0.10	0.5	0.15	0.4	0.10
2	0.7	0.01	1.1	0.05	0.4	0.05	1.1	0.15	0.7	0.10	1.1	0.30	0.9	0.35	1.1	0.40	0.92	0.35	0.9	0.15	0.7	0.25
3	1.1	0.01	1.7	0.10	0.5	0.05	1.7	0.20	1.1	0.05	1.7	0.25	1.4	0.30	1.7	0.45	1.38	0.45	1.4	0.00	1.1	0.45
4	1.5	0.05	2.2	0.10	0.7	0.05	2.2	0.25	1.5	0.05	2.2	0.15	1.8	0.35	2.2	0.40	1.84	0.60	1.8	0.01	1.5	0.40
5	1.9	0.05	2.8	0.05	0.9	0.05	2.8	0.30	1.9	0.01	2.8	0.05	2.3	0.25	2.8	0.35	2.3	0.60	2.3	0.10	1.9	0.30
6	2.2	0.05	3.3	0.05	1.1	0.05	3.3	0.15	2.2	0.01	3.3	0.10	2.8	0.20	3.3	0.30	2.76	0.65	2.8	0.05	2.2	0.20
7	2.6	0.01	3.9	0.05	1.3	0.05	3.9	0.10	2.6	0.01	3.9	0.10	3.2	0.15	3.9	0.25	3.22	0.60	3.2	0.00	2.6	0.10
8	3.0	0.01	4.4	0.00	1.4	0.05	4.4	0.10	3.0	0.01	4.4	0.01	3.7	0.15	4.4	0.20	3.68	0.55	3.7	0.01	3.0	0.05
9	3.3	0.01	5.0	0.05	1.6	0.01	5.0	0.05	3.3	0.01	5.0	0.01	4.1	0.05	5.0	0.10	4.14	0.45	4.1	0.01	3.3	0.01
<b>Right Bank</b>	3.7	0.00	5.5	0.00	1.8	0.00	5.5	0.00	3.7	0.00	5.5	0.00	4.6	0.00	5.5	0.00	4.6	0.00	4.6	0.00	3.7	0.00
<b>Feature Type</b> (riffle, run, or pool)	riffle		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 9

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 15:50	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Hwy NN
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0371129	4393397			4.9
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:		Meters
	0371067	4393275			4.9

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
38	Upstream	39	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 9

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments Pasture				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/print	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Trash (tires)				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	40	15	20	5	20

**Aquatic Vegetation:**

None, except on banks
-----------------------

**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 9

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>9</u>  Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0371129</u> UTM Y: <u>4393397</u> +/- <u>4.9</u> (meters) <b>11</b> UTM X: <u>0371067</u> UTM Y: <u>4393275</u> +/- <u>4.9</u> (meters)  Average Stream Width: <u>5.5</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>																Dissolved Oxygen						
Date: <u>9/27/07</u> Time: <u>15:50</u>  Dissolved Oxygen: <u>8.6</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>24.7</u> (°C)																						
Transect Cross-Section																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.7	0.05	0.6	0.55	0.8	0.05	0.8	0.05	0.7	0.05	0.4	0.05	0.3	0.01	0.4	0.05	0.37	0.01	0.6	0.05	0.4	0.01
2	1.5	0.30	1.3	0.85	1.6	0.40	1.6	0.35	1.5	0.20	0.7	0.10	0.5	0.05	0.7	0.10	0.74	0.01	1.1	0.15	0.7	0.05
3	2.2	0.50	1.9	0.75	2.5	0.50	2.5	0.90	2.2	0.25	1.1	0.10	0.8	0.10	1.1	0.15	1.11	0.05	1.7	0.10	1.1	0.10
4	2.9	0.50	2.6	0.70	3.3	0.70	3.3	0.90	2.9	0.40	1.5	0.10	1.1	0.15	1.5	0.20	1.48	0.05	2.2	0.05	1.5	0.15
5	3.7	0.50	3.2	0.70	4.1	0.55	4.1	0.90	3.7	0.40	1.9	0.10	1.4	0.10	1.9	0.20	1.85	0.20	2.8	0.10	1.9	0.20
6	4.4	0.55	3.8	0.80	4.9	0.70	4.9	0.90	4.4	0.40	2.2	0.10	1.6	0.10	2.2	0.25	2.22	0.20	3.3	0.15	2.2	0.25
7	5.1	0.60	4.5	0.65	5.7	0.80	5.7	0.90	5.1	0.30	2.6	0.10	1.9	0.05	2.6	0.15	2.59	0.20	3.9	0.15	2.6	0.30
8	5.8	0.60	5.1	0.40	6.6	0.60	6.6	0.75	5.8	0.30	3.0	0.10	2.2	0.05	3.0	0.05	2.96	0.10	4.4	0.20	3.0	0.20
9	6.6	0.25	5.8	0.15	7.4	0.25	7.4	0.45	6.6	0.10	3.3	0.01	2.4	0.01	3.3	0.01	3.33	0.05	5.0	0.15	3.3	0.05
Right Bank	7.3	0.00	6.4	0.00	8.2	0.00	8.2	0.00	7.3	0.00	3.7	0.00	2.7	0.00	3.7	0.00	3.7	0.00	5.5	0.00	3.7	0.00
Feature Type	run		run		run		run		run		run		run		run		run		run		run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 10

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 16:56	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	312th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0370613	4391050		11.3	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0370517	4391119		4.9	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
40	Upstream	41	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
Site # 10

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: None				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: None				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	20	40	30	10	

**Aquatic Vegetation:**

All vegetation on banks
-------------------------

**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 10

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

None

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>10</u>  Estimated Channel Incision: <u>0.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0370613</u> UTM Y: <u>4391050</u> +/- <u>11.3</u> (meters) <b>11</b> UTM X: <u>0370517</u> UTM Y: <u>4391119</u> +/- <u>4.9</u> (meters)  Average Stream Width: <u>7.8</u> (meters)      Length of Survey Segment: <u>156</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>														<b>Dissolved Oxygen</b>								
														Date: <u>9/27/07</u> Time: <u>16:58</u>  Dissolved Oxygen: <u>8.3</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.7</u> (°C)								
<b>Transect Cross-Section</b>																						
<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.3	0.01	0.4	0.05	0.9	0.10	1.1	0.20	1.1	0.15	0.9	0.10	1.2	0.15	0.7	0.15	0.73	0.05	0.7	0.05	0.6	0.01
2	0.5	0.15	0.7	0.05	1.8	0.15	2.2	0.50	2.2	0.30	1.8	0.30	2.4	0.60	1.5	0.30	1.46	0.30	1.5	0.10	1.1	0.10
3	0.8	0.15	1.1	0.05	2.7	0.05	3.3	0.55	3.3	0.35	2.7	0.30	3.6	0.55	2.2	0.50	2.19	0.35	2.2	0.15	1.7	0.20
4	1.1	0.15	1.5	0.10	3.6	0.15	4.4	0.60	4.4	0.45	3.6	0.30	4.8	0.50	2.9	0.65	2.92	0.40	2.9	0.25	2.2	0.35
5	1.4	0.10	1.9	0.15	4.6	0.25	5.5	0.60	5.5	0.55	4.6	0.45	6.0	0.50	3.7	0.70	3.65	0.50	3.7	0.35	2.8	0.35
6	1.6	0.10	2.2	0.15	5.5	0.15	6.6	0.65	6.6	0.80	5.5	0.60	7.1	0.45	4.4	0.70	4.38	0.50	4.4	0.40	3.3	0.30
7	1.9	0.05	2.6	0.15	6.4	0.25	7.7	0.75	7.7	0.80	6.4	0.70	8.3	0.35	5.1	0.50	5.11	0.35	5.1	0.35	3.9	0.20
8	2.2	0.05	3.0	0.10	7.3	0.20	8.8	0.85	8.8	0.85	7.3	0.70	9.5	0.35	5.8	0.25	5.84	0.20	5.8	0.20	4.4	0.15
9	2.4	0.05	3.3	0.01	8.2	0.10	9.9	0.50	9.9	0.65	8.2	0.60	10.7	0.10	6.6	0.01	6.57	0.10	6.6	0.10	5.0	0.10
Right Bank	2.7	0.00	3.7	0.00	9.1	0.00	11.0	0.00	11.0	0.00	9.1	0.00	11.9	0.00	7.3	0.00	7.3	0.00	7.3	0.00	5.5	0.00
Feature Type	run		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 11

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 17:40	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	308th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0369993	4389662		9.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0369900	4389420		9.1	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
42	Downstream	43	Upstream	44	orange "scum"
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
 Site # 11

# **Field Data Sheets for Recreational Use Stream Surveys**

## **Data Sheet B- Site Characterization (Continued)**

### **Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

### **Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Trash (tires)				

### **Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
20	10	50			20

### **Aquatic Vegetation:**

All vegetation on banks.
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### **Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 11

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>11</u>  Estimated Channel Incision: <u>0.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0369993</u> UTM Y: <u>4389662</u> +/- <u>9.4</u> (meters) <b>11</b> UTM X: <u>0369900</u> UTM Y: <u>4389420</u> +/- <u>9.1</u> (meters)  Average Stream Width: <u>9.4</u> (meters)      Length of Survey Segment: <u>168</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/27/07</u> Time: <u>17:41</u>  Dissolved Oxygen: <u>9.6</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.9</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1.4	0.20	1.5	0.20	1.5	0.01	0.6	0.05	0.6	0.25	0.6	0.15	0.4	0.05	0.9	0.05	0.73	0.01	0.5	0.05	0.7	0.30
2	2.7	0.35	2.9	0.35	2.9	0.05	1.1	0.10	1.1	0.25	1.3	0.30	0.7	0.15	1.8	0.15	1.46	0.15	0.9	0.20	1.5	0.60
3	4.1	0.30	4.4	0.35	4.4	0.10	1.7	0.05	1.7	0.15	1.9	0.30	1.1	0.10	2.7	0.05	2.19	0.25	1.4	0.20	2.2	0.40
4	5.5	0.30	5.8	0.35	5.8	0.10	2.2	0.05	2.2	0.10	2.6	0.35	1.5	0.20	3.6	0.00	2.92	0.30	1.8	0.25	2.9	0.25
5	6.9	0.30	7.3	0.40	7.3	0.15	2.8	0.01	2.8	0.01	3.2	0.35	1.9	0.25	4.6	0.05	3.65	0.35	2.3	0.25	3.7	0.35
6	8.2	0.30	8.8	0.40	8.8	0.05	3.3	0.01	3.3	0.01	3.8	0.35	2.2	0.25	5.5	0.10	4.38	0.30	2.8	0.15	4.4	0.40
7	9.6	0.35	10.2	0.40	10.2	0.05	3.9	0.01	3.9	0.01	4.5	0.25	2.6	0.20	6.4	0.20	5.11	0.30	3.2	0.10	5.1	0.30
8	11.0	0.30	11.7	0.40	11.7	0.05	4.4	0.01	4.4	0.01	5.1	0.15	3.0	0.10	7.3	0.35	5.84	0.25	3.7	0.05	5.8	0.15
9	12.3	0.15	13.1	0.10	13.1	0.05	5.0	0.01	5.0	0.01	5.8	0.05	3.3	0.05	8.2	0.20	6.57	0.05	4.1	0.01	6.6	0.05
Right Bank	13.7	0.00	14.6	0.00	14.6	0.00	5.5	0.00	5.5	0.00	6.4	0.00	3.7	0.00	9.1	0.00	7.3	0.00	4.6	0.00	7.3	0.00
Feature Type	run		run		run		run		run		run		riffle		run		run		run		run	

(riffle, run, or pool)

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 12

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/27/07 18:40	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	297th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0368898	4387842		5.2	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0368938	4387710		4.0 feet	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
45	Downstream	46	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
 Site # 12

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:

Comments: Cropfields and construction

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other: Old bridge remnants

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	20	70	10		

**Aquatic Vegetation:**

only vegetation on banks					
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 12

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/27/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>12</u>  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0368898</u> UTM Y: <u>4387842</u> +/- <u>5.2</u> (meters) <b>11</b> UTM X: <u>0368938</u> UTM Y: <u>4387710</u> +/- <u>4</u> (meters)  Average Stream Width: <u>5.5</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>																Dissolved Oxygen						
Date: <u>9/27/07</u> Time: <u>18:41</u>  Dissolved Oxygen: <u>6.3</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.7</u> (°C)																						
Transect Cross-Section																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.5	0.05	1.1	0.40	0.7	0.05	0.5	0.10	0.3	0.10	0.4	0.10	0.5	0.10	0.6	0.01	0.37	0.01	0.6	0.10	0.6	0.01
2	0.9	0.15	2.2	1.00	1.5	0.15	0.9	0.20	0.5	0.20	0.7	0.30	0.9	0.30	1.1	0.05	0.74	0.05	1.3	0.60	1.3	0.10
3	1.4	0.20	3.3	1.00	2.2	0.25	1.4	0.25	0.8	0.50	1.1	0.40	1.4	0.40	1.7	0.10	1.11	0.05	1.9	0.90	1.9	0.60
4	1.8	0.40	4.4	1.00	2.9	0.50	1.8	0.40	1.1	0.40	1.5	0.45	1.8	0.35	2.2	0.10	1.48	0.05	2.6	1.00	2.6	0.90
5	2.3	0.45	5.5	1.00	3.7	0.50	2.3	0.40	1.4	0.30	1.9	0.35	2.3	0.30	2.8	0.10	1.85	0.10	3.2	1.00	3.2	0.75
6	2.8	0.45	6.6	0.90	4.4	0.45	2.8	0.25	1.6	0.20	2.2	0.20	2.8	0.25	3.3	0.10	2.22	0.10	3.8	0.90	3.8	0.85
7	3.2	0.40	7.7	0.85	5.1	0.30	3.2	0.15	1.9	0.10	2.6	0.15	3.2	0.20	3.9	0.05	2.59	0.10	4.5	0.55	4.5	0.60
8	3.7	0.30	8.8	0.40	5.8	0.15	3.7	0.10	2.2	0.05	3.0	0.05	3.7	0.15	4.4	0.00	2.96	0.20	5.1	0.30	5.1	0.40
9	4.1	0.20	9.9	0.10	6.6	0.05	4.1	0.05	2.4	0.01	3.3	0.01	4.1	0.10	5.0	0.01	3.33	0.05	5.8	0.10	5.8	0.30
Right Bank	4.6	0.00	11.0	0.00	7.3	0.00	4.6	0.00	2.7	0.00	3.7	0.00	4.6	0.00	5.5	0.00	3.7	0.00	6.4	0.00	6.4	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 13

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time: 9/28/07 13:16	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	284th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0367257	4385775		3.0	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0367247	4385656		6.4	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
53	Downstream	54	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
 Site # 13

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: trash				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
10	10	80			

**Aquatic Vegetation:**

2% algae on substrate, all other vegetation on banks
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 13

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/28/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>13</u>  Estimated Channel Incision: <u>0.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0367257</u> UTM Y: <u>4385775</u> +/- <u>3</u> (meters) <b>11</b> UTM X: <u>0367247</u> UTM Y: <u>4385656</u> +/- <u>6.4</u> (meters)  Average Stream Width: <u>8.3</u> (meters)      Length of Survey Segment: <u>166</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/28/07</u> Time: <u>13:19</u>  Dissolved Oxygen: <u>7.8</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.9</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.01	0.6	0.01	0.8	0.01	1.2	0.05	1.4	0.05	0.3	0.01	0.4	0.01	0.7	0.01	0.91	0.01	1.1	0.01	1.1	0.05
2	1.3	0.05	1.3	0.10	1.6	0.00	2.4	0.01	2.7	0.10	0.5	0.01	0.7	0.01	1.5	0.10	1.82	0.05	2.2	0.05	2.2	0.10
3	1.9	0.10	1.9	0.20	2.5	0.00	3.6	0.00	4.1	0.00	0.8	0.05	1.1	0.10	2.2	0.25	2.73	0.05	3.3	0.05	3.3	0.05
4	2.6	0.10	2.6	0.15	3.3	0.10	4.8	0.10	5.5	0.00	1.1	0.05	1.5	0.20	2.9	0.30	3.64	0.01	4.4	0.01	4.4	0.01
5	3.2	0.05	3.2	0.10	4.1	0.15	6.0	0.15	6.9	0.00	1.4	0.10	1.9	0.30	3.7	0.25	4.55	0.00	5.5	0.00	5.5	0.00
6	3.8	0.05	3.8	0.00	4.9	0.25	7.1	0.20	8.2	0.00	1.6	0.10	2.2	0.20	4.4	0.25	5.46	0.00	6.6	0.00	6.6	0.00
7	4.5	0.01	4.5	0.00	5.7	0.20	8.3	0.20	9.6	0.01	1.9	0.10	2.6	0.15	5.1	0.30	6.37	0.00	7.7	0.00	7.7	0.01
8	5.1	0.01	5.1	0.05	6.6	0.15	9.5	0.10	11.0	0.10	2.2	0.10	3.0	0.10	5.8	0.05	7.28	0.01	8.8	0.00	8.8	0.05
9	5.8	0.01	5.8	0.05	7.4	0.10	10.7	0.25	12.3	0.15	2.4	0.10	3.3	0.01	6.6	0.01	8.19	0.01	9.9	1.00	9.9	0.15
Right Bank	6.4	0.00	6.4	0.00	8.2	0.00	11.9	0.00	13.7	0.00	2.7	0.00	3.7	0.00	7.3	0.00	9.1	0.00	11.0	0.00	11.0	0.00
Feature Type	riffle		run		run		run		run		run		pool		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID #            322  
 Site #            14

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time:            9/28/07        13:57	Site Location Description (e.g. road crossing):
Personnel:                D. Dodson and G. Gould	Poage
Current Weather Conditions:            clear	Facility Name:            Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number:        MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)			
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:            Meters
	0366060	4383380	7.9
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:            Meters
	0365928	4383358	7.6

**Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
55	Downstream	56	Upstream	57	Residents viewing/fishing area
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
 Site # 14

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: Dogs				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input checked="" type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input checked="" type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: Viewing area. Tires and trash				

**Substrate:**

% Cobble	% Gravel	% Sand 70	% Silt 10	% Mud/Clay 20	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 14

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/28/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>14</u>  Estimated Channel Incision: <u>0.5</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0366060</u> UTM Y: <u>4383380</u> +/- <u>7.9</u> (meters) <b>11</b> UTM X: <u>0365928</u> UTM Y: <u>4383358</u> +/- <u>7.6</u> (meters)  Average Stream Width: <u>13.8</u> (meters)      Length of Survey Segment: <u>276</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>														Dissolved Oxygen					
														Date: <u>9/28/07</u>		Time: <u>13:59</u>			
														Dissolved Oxygen: <u>8.3</u> (mg/L)					
														Dissolved Oxygen: _____ (% sat)					
														Specific Cond: _____ (µS/cm)					
														Water Temperature: <u>24.7</u> (°C)					

Transect Cross-Section																						
	<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>	
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.7	0.01	1.3	0.70	1.3	1.00	1.3	0.50	1.5	0.15	1.6	0.60	1.6	0.15	1.6	0.30	1.55	1.00	1.6	1.00	1.4	1.00
2	1.5	0.10	2.6	0.60	2.6	1.00	2.6	0.85	2.9	1.00	3.1	1.00	3.1	0.50	3.1	0.90	3.1	1.00	3.1	1.00	2.7	1.00
3	2.2	0.20	3.8	0.25	3.8	0.60	3.8	0.85	4.4	0.95	4.7	1.00	4.7	0.85	4.7	1.00	4.65	1.00	4.7	1.00	4.1	1.00
4	2.9	0.25	5.1	0.00	5.1	0.60	5.1	0.80	5.8	0.85	6.2	0.95	6.2	0.80	6.2	0.95	6.2	1.00	6.2	1.00	5.5	1.00
5	3.7	0.35	6.4	0.05	6.4	0.55	6.4	0.80	7.3	0.80	7.8	1.00	7.8	0.80	7.8	0.90	7.75	1.00	7.8	1.00	6.9	1.00
6	4.4	0.40	7.7	0.40	7.7	0.55	7.7	0.55	8.8	0.80	9.3	1.00	9.3	0.70	9.3	0.80	9.3	1.00	9.3	1.00	8.2	1.00
7	5.1	0.35	9.0	0.50	9.0	0.55	9.0	0.60	10.2	0.70	10.9	0.90	10.9	0.75	10.9	0.75	10.85	0.90	10.9	1.00	9.6	1.00
8	5.8	0.25	10.2	0.35	10.2	0.45	10.2	0.50	11.7	0.60	12.4	0.65	12.4	0.75	12.4	0.70	12.4	0.50	12.4	0.80	11.0	1.00
9	6.6	0.05	11.5	0.05	11.5	0.30	11.5	0.01	13.1	0.20	14.0	0.25	14.0	0.35	14.0	0.50	13.95	0.05	14.0	0.10	12.3	0.10
<b>Right Bank</b>	7.3	0.00	12.8	0.00	12.8	0.00	12.8	0.00	14.6	0.00	15.5	0.00	15.5	0.00	15.5	0.00	15.5	0.00	15.5	0.00	13.7	0.00
Feature Type (riffle, run, or pool)	run		run		run		run		run		run		run		run		run		run		run	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 15

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	9/28/07 14:55	Site Location Description (e.g. road crossing):
Personnel:	D. Dodson and G. Gould	Hwy 169
Current Weather Conditions:	clear	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days:	1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, in Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0364764	4383820		6.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0364648	4383726		6.1	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
58	Downstream	59	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 15

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: trash				

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
50		20			30

**Aquatic Vegetation:**

All vegetation on banks
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 15

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/28/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>15</u>  Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0364764</u> UTM Y: <u>4383820</u> +/- <u>6.1</u> (meters) <b>11</b> UTM X: <u>0364648</u> UTM Y: <u>4383726</u> +/- <u>6.1</u> (meters)  Average Stream Width: <u>9</u> (meters)      Length of Survey Segment: <u>180</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/28/07</u> Time: <u>13:26</u>  Dissolved Oxygen: <u>6.3</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>25.6</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.01	1.3	0.25	1.1	0.20	1.1	0.20	0.8	0.25	0.9	0.20	0.8	0.05	0.7	0.05	0.82	0.01	0.9	0.05	0.8	0.05
2	1.3	0.05	2.6	0.15	2.2	0.20	2.2	0.75	1.6	0.65	1.8	0.45	1.6	0.20	1.5	0.20	1.64	0.20	1.8	0.20	1.6	0.10
3	1.9	0.05	3.8	0.05	3.3	0.20	3.3	0.75	2.5	0.70	2.7	0.45	2.5	0.50	2.2	0.30	2.46	0.30	2.7	0.50	2.5	0.25
4	2.6	0.05	5.1	0.00	4.4	0.05	4.4	0.60	3.3	0.70	3.6	0.45	3.3	0.50	2.9	0.50	3.28	0.35	3.6	0.75	3.3	0.45
5	3.2	0.10	6.4	0.00	5.5	0.25	5.5	0.40	4.1	0.60	4.6	0.45	4.1	0.60	3.7	0.50	4.1	0.30	4.6	0.65	4.1	0.50
6	3.8	0.01	7.7	0.00	6.6	0.25	6.6	0.40	4.9	0.50	5.5	0.35	4.9	0.50	4.4	0.35	4.92	0.35	5.5	0.40	4.9	0.40
7	4.5	0.05	9.0	0.00	7.7	0.30	7.7	0.30	5.7	0.30	6.4	0.30	5.7	0.40	5.1	0.20	5.74	0.40	6.4	0.25	5.7	0.45
8	5.1	0.10	10.2	0.05	8.8	0.30	8.8	0.20	6.6	0.20	7.3	0.25	6.6	0.30	5.8	0.15	6.56	0.20	7.3	0.05	6.6	0.35
9	5.8	0.01	11.5	0.01	9.9	0.05	9.9	0.01	7.4	0.05	8.2	0.10	7.4	0.15	6.6	0.01	7.38	0.05	8.2	0.05	7.4	0.05
Right Bank	6.4	0.00	12.8	0.00	11.0	0.00	11.0	0.00	8.2	0.00	9.1	0.00	8.2	0.00	7.3	0.00	8.2	0.00	9.1	0.00	8.2	0.00
Feature Type (riffle, run, or pool)	riffle		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 16

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/28/07 16:10	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	145th
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.09 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0362389	4382868		4.9	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0362274	4382909		8.8	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
60	Downstream	61	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
 Site # 16

### Field Data Sheets for Recreational Use Stream Surveys

#### **Data Sheet B- Site Characterization (Continued)**

##### **Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:

Comments: Crops

##### **Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other: Trash (tire, toilet, etc.)

##### **Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
10		90			

##### **Aquatic Vegetation:**

All vegetation on banks

##### **Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 16

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/28/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>16</u>  Estimated Channel Incision: <u>0.4</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0362389</u> UTM Y: <u>4382868</u> +/- <u>4.9</u> (meters) <b>11</b> UTM X: <u>0362274</u> UTM Y: <u>4382909</u> +/- <u>8.8</u> (meters)  Average Stream Width: <u>7.1</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9/28/07</u> Time: <u>16:10</u>  Dissolved Oxygen: <u>6.4</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>23.2</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.01	0.5	0.01	0.4	0.05	0.4	0.01	0.9	0.05	0.9	0.05	0.9	0.05	0.9	0.10	0.73	0.01	0.8	0.10	0.9	0.05
2	0.9	0.05	0.9	0.10	0.7	0.10	0.7	0.10	1.8	0.20	1.8	0.15	1.8	0.25	1.8	0.35	1.46	0.15	1.6	0.30	1.8	0.15
3	1.4	0.10	1.4	0.20	1.1	0.20	1.1	0.20	2.7	0.01	2.7	0.05	2.7	0.15	2.7	0.45	2.19	0.20	2.5	0.25	2.7	0.10
4	1.8	0.10	1.8	0.15	1.5	0.25	1.5	0.15	3.6	0.01	3.6	0.15	3.6	0.01	3.6	0.40	2.92	0.05	3.3	0.05	3.6	0.00
5	2.3	0.15	2.3	0.05	1.9	0.15	1.9	0.15	4.6	0.05	4.6	0.15	4.6	0.00	4.6	0.00	3.65	0.10	4.1	0.10	4.6	0.00
6	2.8	0.20	2.8	0.05	2.2	0.15	2.2	0.10	5.5	0.00	5.5	0.15	5.5	0.00	5.5	0.05	4.38	0.10	4.9	0.15	5.5	0.00
7	3.2	0.15	3.2	0.05	2.6	0.10	2.6	0.05	6.4	0.15	6.4	0.25	6.4	0.00	6.4	0.15	5.11	0.20	5.7	0.10	6.4	0.01
8	3.7	0.10	3.7	0.01	3.0	0.05	3.0	0.01	7.3	0.05	7.3	0.20	7.3	0.05	7.3	0.20	5.84	0.15	6.6	0.20	7.3	0.10
9	4.1	0.05	4.1	0.01	3.3	0.01	3.3	0.01	8.2	0.01	8.2	0.10	8.2	0.01	8.2	0.05	6.57	0.10	7.4	0.05	8.2	0.05
Right Bank	4.6	0.00	4.6	0.00	3.7	0.00	3.7	0.00	9.1	0.00	9.1	0.00	9.1	0.00	9.1	0.00	7.3	0.00	8.2	0.00	9.1	0.00
Feature Type	run		run		run		run		riffle		run		riffle		run		run		run		run	

(riffle, run, or pool)

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

WBID # 322  
 Site # 17

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 10.08.07 12:00	Site Location Description (e.g. road crossing):
Personnel: L. Brown and G. Gould	upstream 130th road
Current Weather Conditions: clear	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.4 inches	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0360403	4382672		2.7	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0360567	4382448		11.3	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
2	upstream	1	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 17

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other: pasture

Comments:

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other:

none

**Substrate:**

% Cobble	% Gravel	% Sand 70	% Silt 15	% Mud/Clay 15	% Bedrock
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**Aquatic Vegetation:**

none

**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 17

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: gilisa gould Date of Survey: 10.08.07

Organization: SES, Inc Position: field team leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>17</u>  Estimated Channel Incision: <u>4.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0360403</u> UTM Y: <u>4382672</u> +/- <u>2.7</u> (meters) <b>11</b> UTM X: <u>0360567</u> UTM Y: <u>4382448</u> +/- <u>11.3</u> (meters)  Average Stream Width: <u>9</u> (meters)      Length of Survey Segment: <u>180</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Larissa Brown and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>10.08.07</u> Time: <u>12:00</u>  Dissolved Oxygen: <u>5</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>18.8</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.9	0.05	0.9	0.05	0.9	0.01	0.8	0.20	0.8	0.01	0.8	0.10	0.8	0.10	0.5	0.01	0.6	0.01	0.6	0.05	0.4	0.05
2	1.8	0.10	1.8	0.25	1.8	0.00	1.6	0.25	1.6	0.01	1.6	0.75	1.6	0.20	1.0	0.01	1.2	0.05	1.2	0.05	0.8	0.20
3	2.7	0.15	2.7	0.60	2.7	0.00	2.4	0.25	2.4	0.00	2.4	0.20	2.4	0.15	1.5	0.05	1.8	0.05	1.8	0.05	1.2	0.10
4	3.6	0.15	3.6	0.75	3.6	0.01	3.2	0.30	3.2	0.05	3.2	0.20	3.2	0.15	2.0	0.05	2.4	0.05	2.4	0.20	1.6	0.10
5	4.5	0.15	4.5	0.95	4.5	0.10	4.0	0.30	4.0	0.15	4.0	0.15	4.0	0.15	2.5	0.10	3.0	0.15	3.0	0.30	2.0	0.10
6	5.4	0.20	5.4	1.00	5.4	0.20	4.8	0.35	4.8	0.40	4.8	0.10	4.8	0.10	3.0	0.20	3.6	0.20	3.6	0.35	2.4	0.05
7	6.3	0.20	6.3	1.00	6.3	0.30	5.6	0.50	5.6	0.45	5.6	0.10	5.6	0.05	3.5	0.20	4.2	0.20	4.2	0.40	2.8	0.05
8	7.2	0.35	7.2	1.00	7.2	0.45	6.4	0.40	6.4	0.45	6.4	0.15	6.4	0.05	4.0	0.20	4.8	0.30	4.8	0.30	3.2	0.01
9	8.1	0.15	8.1	1.00	8.1	0.60	7.2	0.10	7.2	0.20	7.2	0.20	7.2	0.01	4.5	0.15	5.4	0.15	5.4	0.05	3.6	0.01
<b>Right Bank</b>	9.0	0.00	9.0	0.00	9.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	5.0	0.00	6	0.00	6.0	0.00	4.0	0.00
<b>Feature Type</b> (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		riffle		riffle		pool		pool		riffle	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould      Date: 10.18.07

WBID # 322  
 Site # 18

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 10.08.07	3:00	Site Location Description (e.g. road crossing):
Personnel: L. Brown & G. Gould		downstream 130th/Horn Rd.
Current Weather Conditions: clear		Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days: 1.4 inches		Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0359287	4381979		3.0	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0359117	4381860		5.2	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
3	upstream	4	downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 322  
 Site # 18

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:

Comments:  
pasture

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other:  
none

**Substrate:**

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	5	90	5		

**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 18

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: gilisa gould Date of Survey: 10.08.07

Organization: SES, Inc. Position: field team leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>18</u>  Estimated Channel Incision: <u>5.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0359287</u> UTM Y: <u>4381979</u> +/- <u>3</u> (meters) <b>11</b> UTM X: <u>0359117</u> UTM Y: <u>4381860</u> +/- <u>5.2</u> (meters)  Average Stream Width: <u>8</u> (meters)      Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Gilisa Gould and Larissa Brown</u>														<b>Dissolved Oxygen</b>  Date: <u>10.08.07</u> Time: <u>3:00</u>  Dissolved Oxygen: <u>1.9</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>26.8</u> (°C)								
<b>Transect Cross-Section</b>																						
Station	<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.4	0.20	0.6	0.05	0.8	0.01	0.8	0.05	0.9	0.05	0.9	0.05	0.5	0.15	0.9	0.10	0.8	0.05	0.8	0.10	0.7	0.10
2	0.8	0.40	1.2	0.40	1.6	0.10	1.6	0.20	1.8	0.20	1.8	0.20	1.0	0.30	1.8	0.30	1.6	0.20	1.6	0.20	1.4	0.30
3	1.2	0.30	1.8	0.25	2.4	0.15	2.4	0.20	2.7	0.30	2.7	0.20	1.5	0.30	2.7	0.25	2.4	0.15	2.4	0.15	2.1	0.20
4	1.6	0.20	2.4	0.25	3.2	0.20	3.2	0.15	3.6	0.35	3.6	0.25	2.0	0.20	3.6	0.15	3.2	0.15	3.2	0.20	2.8	0.20
5	2.0	0.05	3.0	0.20	4.0	0.25	4.0	0.05	4.5	0.25	4.5	0.35	2.5	0.15	4.5	0.00	4.0	0.30	4.0	0.20	3.5	0.20
6	2.4	0.00	3.6	0.15	4.8	0.35	4.8	0.15	5.4	0.40	5.4	0.50	3.0	0.10	5.4	0.00	4.8	0.30	4.8	0.20	4.2	0.20
7	2.8	0.00	4.2	0.10	5.6	0.40	5.6	0.25	6.3	0.40	6.3	0.60	3.5	0.10	6.3	0.00	5.6	0.20	5.6	0.15	4.9	0.15
8	3.2	0.05	4.8	0.05	6.4	0.35	6.4	0.35	7.2	0.25	7.2	0.35	4.0	0.05	7.2	0.05	6.4	0.05	6.4	0.15	5.6	0.10
9	3.6	0.01	5.4	0.01	7.2	0.10	7.2	0.10	8.1	0.01	8.1	0.15	4.5	0.01	8.1	0.01	7.2	0.01	7.2	0.05	6.3	0.05
<b>Right Bank</b>	4.0	0.00	6.0	0.00	8.0	0.00	8.0	0.00	9.0	0.00	9.0	0.00	5.0	0.00	9.0	0.00	8	0.00	8.0	0.00	7.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		run		run/pool		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould      Date: 10.18.07

WBID # 322  
 Site # 19

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time: 9/28/07 17:14	Site Location Description (e.g. road crossing):
Personnel: D. Dodson and G. Gould	Hwy 116
Current Weather Conditions: Sunny	Facility Name: Airy Acres Mobile Home Ct.
Weather conditions for the past 10 days:	Permit Number: MO 0117897
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>	

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0356961	4379895		8.8	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0357030	4379790		8.8	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
62	Upstream	63	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 322  
Site # 19

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:

Comments: none

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other: Trash

**Substrate:**

% Cobble	% Gravel	% Sand 90	% Silt	% Mud/Clay 10	% Bedrock
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**Aquatic Vegetation:**

All vegetation on banks

**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input checked="" type="checkbox"/> Other:
					Brown
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 322  
Site # 19

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Gilisa Gould Date of Survey: 9/28/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>322</u> Site #: <u>19</u>  Estimated Channel Incision: <u>0.3</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0356961</u> UTM Y: <u>4379895</u> +/- <u>8.8</u> (meters) <b>11</b> UTM X: <u>0357030</u> UTM Y: <u>4379790</u> +/- <u>8.8</u> (meters)  Average Stream Width: <u>5.6</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Drew Dodson and Gilisa Gould</u>	<b>Dissolved Oxygen</b>  Date: <u>9.28.07</u> Time: <u>17:15</u>  Dissolved Oxygen: <u>7.2</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>24.4</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.01	0.7	0.05	0.7	0.05	0.7	0.01	0.3	0.01	0.6	0.05	0.6	0.10	0.4	0.01	0.37	0.05	0.6	0.15	0.6	0.15
2	1.1	0.10	1.5	0.20	1.5	0.15	1.5	0.00	0.5	0.05	1.1	0.25	1.3	0.20	0.7	0.15	0.74	0.10	1.1	0.25	1.3	0.05
3	1.7	0.01	2.2	0.40	2.2	0.20	2.2	0.00	0.8	0.15	1.7	0.20	1.9	0.01	1.1	0.05	1.11	0.05	1.7	0.20	1.9	0.00
4	2.2	0.15	2.9	0.35	2.9	0.20	2.9	0.00	1.1	0.15	2.2	0.25	2.6	0.00	1.5	0.05	1.48	0.05	2.2	0.10	2.6	0.00
5	2.8	0.20	3.7	0.50	3.7	0.20	3.7	0.05	1.4	0.15	2.8	0.20	3.2	0.10	1.9	0.15	1.85	0.05	2.8	0.25	3.2	0.01
6	3.3	0.20	4.4	0.55	4.4	0.30	4.4	0.10	1.6	0.20	3.3	0.20	3.8	0.25	2.2	0.30	2.22	0.05	3.3	0.15	3.8	0.05
7	3.9	0.15	5.1	0.40	5.1	0.35	5.1	0.20	1.9	0.20	3.9	0.10	4.5	0.20	2.6	0.35	2.59	0.10	3.9	0.05	4.5	0.15
8	4.4	0.15	5.8	0.20	5.8	0.20	5.8	0.10	2.2	0.10	4.4	0.10	5.1	0.20	3.0	0.30	2.96	0.15	4.4	0.15	5.1	0.10
9	5.0	0.01	6.6	0.05	6.6	0.05	6.6	0.01	2.4	0.01	5.0	0.01	5.8	0.01	3.3	0.20	3.33	0.15	5.0	0.15	5.8	0.05
Right Bank	5.5	0.00	7.3	0.00	7.3	0.00	7.3	0.00	2.7	0.00	5.5	0.00	6.4	0.00	3.7	0.00	3.7	0.00	5.5	0.00	6.4	0.00
Feature Type (riffle, run, or pool)	riffle		run		run		run		run		run		run		run		run		run		run	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Gilisa Gould      Date: 10/3/07

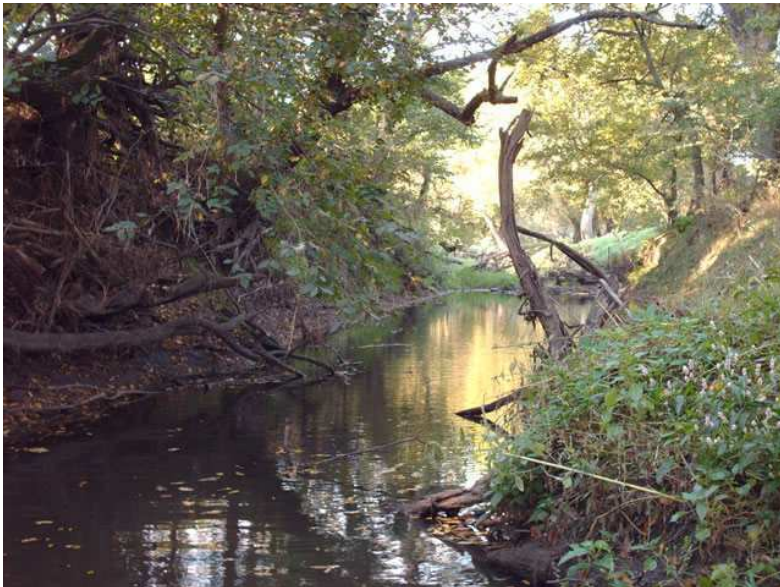
**WBID# 0322**



**Site# 1 Photo ID# 19, Downstream**



**Site# 1 Photo ID# 20, Upstream**



**Site# 2 Photo ID# 21, Downstream**



**Site# 2 Photo ID# 22, Upstream**



**WBID# 0322**



**Site# 2 Photo ID# 23, Livestock watering**



**Site# 2 Photo ID# 24, Livestock watering**



**Site# 3 Photo ID# 25, Downstream**



**Site# 3 Photo ID# 26, Upstream**



**WBID# 0322**



**Site# 4 Photo ID# 27, Livestock watering**



**Site# 4 Photo ID# 28, Upstream**



**Site# 4 Photo ID# 29, Downstream**



**Site# 5 Photo ID# 30, Upstream**



**WBID# 0322**



**Site# 5 Photo ID# 31, Downstream**



**Site# 6 Photo ID# 32, Upstream**



**Site# 6 Photo ID# 33, Downstream**



**Site# 7 Photo ID# 34, Upstream**



**WBID# 0322**



**Site# 7 Photo ID# 35, Downstream**



**Site# 8 Photo ID# 36, Upstream**



**Site# 8 Photo ID# 37, Downstream**



**Site# 9 Photo ID# 38, Upstream**



**WBID# 0322**



**Site# 9 Photo ID# 39, Downstream**



**Site# 10 Photo ID# 40, Upstream**



**Site# 10 Photo ID# 41, Downstream**



**Site# 11 Photo ID# 42, Downstream**



**WBID# 0322**



**Site# 11 Photo ID# 43, Upstream**



**Site# 11 Photo ID# 44, Orange “scum”**



**Site# 12 Photo ID# 45, Downstream**



**Site# 12 Photo ID# 46, Upstream**



**WBID# 0322**



**Site# 13 Photo ID# 53, Downstream**



**Site# 13 Photo ID# 54, Upstream**



**Site# 14 Photo ID# 55, Downstream**



**Site# 14 Photo ID# 56, Upstream**



**WBID# 0322**



**Site# 14 Photo ID# 57, Resident's viewing/fishing area**



**Site# 15 Photo ID# 58, Downstream**



**Site# 15 Photo ID# 59, Upstream**



**Site# 16 Photo ID# 60, Downstream**



**WBID# 0322**



**Site# 16 Photo ID# 61, Upstream**



**Site# 17 Photo ID# 2, Upstream**



**Site# 17 Photo ID# 1, Downstream**



**Site# 18 Photo ID# 3, Upstream**



**WBID# 0322**



**Site# 18 Photo ID# 4, Downstream**



**Site# 19 Photo ID# 62, Upstream**



**Site# 19 Photo ID# 63, Downstream**

WBID # 322

Site # 17

## **Field Data Sheets for Recreational Use Stream Surveys**

### **Data Sheet D – Recreational Use Interview**

(must be completed for each interview)

#### **I. Introduction**

**Date & Time** (include AM or PM): 10/14/07 2:00PM

**Interviewed:** ☐ In person ☐ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

**Interviewee selected because** (e.g., house next to stream; standing by stream, etc.) \_\_\_\_\_

**Interviewer introduction to Interviewee:** “My name is \_\_\_\_\_, I work for \_\_(*name of your employer*)\_\_\_\_\_, and I am collecting information on how people use \_\_(*name of the stream*)\_\_\_\_\_.”

#### **ASK:**

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

X Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: Thomas J. Garrison

Current mailing address: 12992 SE Horn Rd

Daytime phone number: (816) 452-2777

E-mail address (optional): rbg\_tjg@yahoo.com

2.a.) Do you live in this area? X Yes ☐ No

If yes, how many years? 42

2.b.) If you don't live in this area, are you still familiar with this stream? X Yes ☐ No

If yes, how many years? 42

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to “II. Personal Use?”.

If no, proceed to Section V.

#### **II. Personal Use?**

1.) Have you or your family personally used the stream for recreation since November 28, 1975?

X Yes ☐ No

If yes, proceed to #3.

If no, proceed to #2.

2.a.) List reasons stream not used. \_\_\_\_\_

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Site # \_\_\_17\_\_\_\_\_

2.b.) Proceed to “III. Witnessed Use?”.

3.) How do you use the stream? Fishing

<b><i>Whole Body Contact Recreation (WBCR)</i></b>			
<input type="checkbox"/> Swimming	<input type="checkbox"/> Tubing	<input type="checkbox"/> Snorkeling/Skin Diving	<input type="checkbox"/> Water Skiing

**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

<b><i>Secondary Contact Recreation (SCR)</i></b>				
X Fishing	<input type="checkbox"/> Wading	<input type="checkbox"/> Boating	<input type="checkbox"/> Trapping	<input type="checkbox"/> Other:

**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

One time per Year \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### **III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975?

X Yes ☐ No

If yes, proceed to #2.

If no, proceed to, “IV. Anecdotal Use?”.

2.) What kinds of uses have you witnessed?

<b><i>Whole Body Contact Recreation (WBCR)</i></b>			
<input type="checkbox"/> Swimming	<input type="checkbox"/> Tubing	<input type="checkbox"/> Snorkeling/Skin Diving	<input type="checkbox"/> Water Skiing

WBID # \_322\_\_\_\_\_

Site # \_\_\_17\_\_\_\_\_

**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

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2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

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<b><i>Secondary Contact Recreation (SCR)</i></b>				
<input checked="" type="checkbox"/> Fishing	<input type="checkbox"/> Wading	<input type="checkbox"/> Boating	<input checked="" type="checkbox"/> Trapping	<input type="checkbox"/> Other:

**If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:**

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

---

---

---

2.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). \_\_\_\_\_

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**IV. Anecdotal Use?**

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☐ Yes ☒ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

<b><i>Whole Body Contact Recreation (WBCR)</i></b>			
<input type="checkbox"/> Swimming	<input type="checkbox"/> Tubing	<input type="checkbox"/> Snorkeling/Skin Diving	<input type="checkbox"/> Water Skiing

**If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? \_\_\_\_\_

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WBID # \_322\_\_\_\_\_

Site # \_\_\_\_17\_\_\_\_\_

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol).\_\_\_\_\_

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<i>Secondary Contact Recreation (SCR)</i>				
<input type="checkbox"/> Fishing	<input type="checkbox"/> Wading	<input type="checkbox"/> Boating	<input type="checkbox"/> Trapping	<input type="checkbox"/> Other:

**If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:**

2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)?\_\_\_\_\_

---

---

---

2.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol).\_\_\_\_\_

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**V. Others to Contact?**

Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ No

If yes, that person's contact info (name, address, phone, directions?)\_\_\_\_\_

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If no, thank the individual for taking the time to talk to you and conclude the interview.

**VI. Additional Comments**

From the Interviewee:\_\_\_\_\_

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From the Interviewer:\_\_\_\_\_

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WBID # \_322\_\_\_\_\_

Site # \_\_17\_\_\_\_\_

## VII. Information on Interviewer

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes   XNo   If yes, how (check all that apply):

Workshop? (if so, enter date): \_\_\_\_\_

On-line training seminar? \_\_\_\_\_

Followed Interview Instruction Sheets? \_\_\_\_\_

Other \_\_\_\_\_

Signature: \_\_Gilisa Gould\_\_\_\_\_

Printed Name: \_Gilisa Gould\_\_\_\_\_

Employer (where applicable): SES, Inc. \_\_\_\_\_

Interviewer's phone #: \_(913)307-0046\_\_\_\_\_ E-mail: ggould@ses-corp.com \_\_\_\_\_